

Lab Report Rubric

Name:	Experiment:	Course/Term:	Plagiarism Score			
CATEGORY	4-5 - exemplary	3 - accomplished	2 - developing	1 - beginning or incomplete	0 - not college level work	Score
Average Score						
Abstract	Concise statement of results and methods that contains reference to all major aspects of carrying out the experiment and the results, well-written. Clearly states important results/consequences of experiment.	Abstract references most of the major aspects of the experiment, some minor details are missing or statement is not concise. Results are not clearly stated.	Abstract misses one or more major aspects of carrying out the experiment or the results. Results are implied.	Several major aspects of the experiment are missing (methods and/or results), student displays a lack of understanding about how to write an abstract	Unrelated to report	_____
Notes:						
Introduction / Theory	A cohesive, well-written section that uses scientific sources to provide context for the experiment and explain the relevant scientific principles. Reaction chemistry is clearly explained. Seminal literature is referenced.	Introduction is nearly complete but does not provide context for some minor points. Contains good information but fails to provide background for one aspect of experiment or information is not cohesive. References are obscure.	Some introductory information, but still missing some major points. Omits reaction chemistry / theory or explanations are unclear / confusing. References are not scholarly.	Very little background information provided or information is incorrect. No references.	Unrelated to report	X 2
Notes:						
Materials and Methods	Narrative of experimental procedures/results. Omits information that can be assumed by peers. Includes observations when appropriate and only important experimental details are included.	Narrative including important experimental details, some minor details or observations missing	Narrative missing some experimental details or observations or includes insignificant procedural details.	Narrative missing several important experimental details or not written in narrative form. Procedural steps are incorrect or illogical.		_____
Data and Results	All figures, graphs, tables are correctly drawn, are numbered and contain titles/captions. Section is organized and easy to read. Only unusual or difficult calculations are shown. All data is explicitly mentioned in text.	All figures, graphs, tables are correctly drawn, but some have minor problems or could still be improved or organization could be improved. All data is mentioned in text.	Most figures, graphs, tables OK, some still missing some important or required features or organization is poor. Some data/tables not explained in text.	Figures, graphs, tables contain errors or are poorly constructed, have missing titles, captions or numbers, units missing or incorrect, etc. or section is unorganized. Data/tables not referenced in text.		_____
Notes:						

- Your report should stand on its own. Don't assume the reader has any prior knowledge of the experiment.
- Do not use the word "created" when discussing a synthetic preparation
- Report appropriate significant figures for all measured values
- Never start a sentence with a number

- In general, don't quote directly from a source. Quoting is only appropriate if the author has a particular significance or the exact wording of the quote is significant
- Don't write in first person or use personal pronouns: we, I, the group, etc
- Refer to tables and figures in text by their table or figure number. Do not include any table or figure that is not directly mentioned in the text.

CATEGORY	4-5 - exemplary	3 - accomplished	2 - developing	1 - beginning or incomplete	0 - not college level work	Score
Discussion	All important trends and data comparisons have been interpreted correctly and discussed, good understanding of results is conveyed. Student clearly makes connections between experimental work and theory and principles explaining the work.	Almost all results have been correctly interpreted and discussed, only minor improvements are needed. Student makes some connections to theory but misses one important explanation.	Some of the results have been correctly interpreted and discussed; partial but incomplete understanding of results is still evident. Student fails to make one or two connections to underlying theory.	Very incomplete or incorrect interpretation of trends and comparison of data indicating a lack of understanding of results. Discussion does not include connections to underlying theory.	Student "explains away" results with insignificant error analysis or illogical/incorrect explanation.	$\frac{3}{\times 2}$
Conclusions	All important conclusions have been clearly made, student shows good understanding	All important conclusions have been drawn, could be better stated	Conclusions are drawn, but are misstated, indicating a lack of understanding. Conclusions implied.	Conclusions missing or missing the important points. Conclusions drawn without adequate support.		$\frac{2}{\quad}$
Notes:						
References	All sources are accurately documented in ACS format. ALL references are from primary scholarly literature relevant to report. No references are secondary.	All sources are accurately documented, but a few are not in ACS format. Contains two or more primary scholarly sources. All references are directly cited in text..	Sources are high quality but are missing citation information. Contains one primary scholarly source. References are not directly cited in text.	Contains no primary, scholarly sources. Uses graphics without citing source. Sources are marginally relevant to report.	Sources are not documented OR information is plagiarized from sources.	$\frac{2}{\quad}$
Notes:						
Diagrams & Illustrations	Are used appropriately to support information in report	Are sometimes used appropriately. One diagram or illustration is either included and does not support text or is omitted and would have supported text. Figures do not have captions or titles	Two or more instances where a diagram is included that is not supportive of text or is omitted where it would have been supportive. Figures included but not referred to in text	Diagrams are not used at all when appropriate or diagrams are overused.		$\frac{1}{\quad}$
Mechanics	All grammar/spelling correct and very well-written. Does not require reader to make assumptions. Does not require prior knowledge of experiment.	Less than 3 grammar/spelling errors, mature, readable style. Does not require prior knowledge of experiment.	Occasional grammar/ spelling errors, generally readable with some rough spots in writing style.	Frequent grammar and/or spelling errors, writing style is rough and immature. Requires reader to have prior knowledge of experiment.		$\frac{2}{\quad}$
Appearance & Formatting	All sections in order, well-formatted, very readable. Formatting enhances readability.	All sections in order, formatting generally good but could still be improved. Formatting adequate	Formatting detracts from readability.	Formatting impedes understanding.		$\frac{3}{\quad}$
Notes:						

- Keep the sections relatively separated. Don't draw conclusions or analyze data in the experiment and data sections. Don't state results in the introduction, etc.
- Don't capitalize element or molecule names unless they start a sentence
- "Spectrums" is not a word! Spectra is plural and spectrum is singular
- Only report successful results unless you can't draw your final conclusion without discussing the errors.